

## 4.0 CUMULATIVE IMPACTS

In this chapter, the Program Alternatives described in Chapter 2 are analyzed in relation to other major projects in the region. Cumulative impacts on environmental resources can result from the incremental effects of a project when added to other past, present, and reasonably foreseeable future projects in the area (State CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor, but collectively significant, actions over a period of time. To ensure a comprehensive impact analysis, this section considers the region of influence for each environmental resource area for which cumulative impacts are evaluated, and the timeframe during which reasonably foreseeable projects would occur. This chapter only discusses resources for which there are potential cumulative impacts.

### 4.1 DESCRIPTION OF CUMULATIVE PROJECTS

The following probable future projects have been identified as occurring within the same general geographical area or within the same potential timeframe as the proposed project and, therefore, could result in cumulative impacts when considered together. The types of projects with the greatest potential for cumulative impacts are ongoing and future oil and gas development and abandonment projects on State and Federal leases in the vicinity of the shell mounds sites (refer to Figure 4-1).

#### 4.1.1 Anticipated Future Activities on Existing Leases

##### ***Carone Petroleum, Inc. (Carone), Plan of Development of the Carpinteria Field Area***

Carone has applied to the CSLC to develop and produce existing State Oil and Gas Leases PRC-4000, PRC-7911, and PRC-3133 within the Carpinteria Field (Carone 2001). Specifically, Carone proposes to drill up to 25 new production or injection wells from Outer Continental Shelf (OCS) Platform Hogan. Oil and gas production from the State leases would be commingled on Platform Hogan with existing production from the federal lease and sent via existing pipelines to the La Conchita Processing Facility, which is located in Ventura County, 3,000 feet northwest of the community of La Conchita. After processing, gas and oil are sold to The Gas Company and other third parties at La Conchita sales meters, and shipped via existing pipelines.

Estimated maximum “commingled” production (both the proposed State and current and future federal development) would be approximately 6,000 barrels of oil per day (BOPD) and 22 million cubic feet per day (MMCFD), with production estimated to decline after 2020. Preparation of an Environmental Impact Report (EIR) for the project pursuant to the requirements of the CEQA has been delayed at the request of the applicant

##### ***Venoco, Inc. (Venoco) Extended Field Development/Marine Terminal***

Venoco has applied to the CSLC, California Coastal Commission (CCC), Ventura and Santa Barbara Counties, and the City of Goleta to allow for expanded development of

- 1 Figure
- 2 4-1 Oil and Gas Projects in the Vicinity of the Shell Mounds
- 3 B&W, 8.5 x 11
- 4

the South Ellwood Field from Platform Holly, which lies in State waters offshore Goleta in Santa Barbara County (Venoco 2001a). As proposed, Venoco would construct a new 28.75-mile, 12-inch offshore sales oil pipeline that would originate at Platform Holly (15 miles west of the shell mounds sites), cross State waters, and connect to an existing 22-inch sales oil pipeline at the Rincon Onshore Separation Facility (ROSF), which is located 5 miles east of Carpinteria in Ventura County, for metering, sale, and shipping to Los Angeles refineries. Venoco is currently evaluating other potential pipeline options as well (pers. comm., S. Greg, Venoco). Platform Holly is currently permitted at a production rate of 20,000 BOPD; current production is 4,100 BOPD. The CSLC staff estimates that as much as 155 million barrels of oil may be produced over the life of the project, with a (best case) peak daily production of around 20,000 BOPD (although half that is a more likely scenario). In January 2002, the agencies determined that Venoco's application was incomplete. Environmental and technical review of the project under the CEQA, including the preparation of an EIR, would commence after Venoco's application is filed as complete. The applications have not been resubmitted to date.

Venoco has applied to the CSLC separately to renew their general lease PRC 3904.1 for the Ellwood Marine Terminal (EMT) in Santa Barbara County. This renewal would allow continued operation of the offshore portion of the EMT through February 28, 2013. The EMT handles all of the oil production from the South Ellwood field. Oil is transported from Platform Holly in State waters through a subsea pipeline to the Ellwood Onshore Facility for processing. Once processed, Venoco sends the oil to the EMT through the common carrier ExxonMobil Pacific Onshore Transfer Pipeline. At the EMT, the oil is first stored in two onshore tanks and is then pumped into a pipeline for loading into a dedicated barge. The terminal has an average barge loading rate of 4,200 barrels per hour and a maximum barge loading capacity of 56,000 barrels. Venoco typically loads a dedicated barge two to three times per month with 55,000 barrels of crude per load. The offshore facilities consist of: a six-point mooring system located in approximately 60-foot water depth, 2,600 feet from shore; two buoys; and a 10-inch-diameter marine loading pipeline that runs from the beach to the mooring area. The upland portion of the marine terminal includes the onshore oil loading line, two crude oil storage tanks, a pump house, a firewater tank, and a water supply pipeline.

#### ***Venoco, Cavern Point Unit (CPU)***

Venoco has applied to the Minerals Management Service (MMS) to conduct exploration activities, including drilling two extended-reach exploratory wells from OCS Platform Gail (located approximately 10 miles west-southwest of Oxnard). If economically recoverable hydrocarbons were found, Venoco would proceed with plans to develop and produce the unit. Oil and gas would be separated on Platform Gail and sent to the Carpinteria Processing Facility (CPF). Development of the CPU may require Venoco to revise the existing Platform Gail Development and Production Plan (DPP) or to submit a new DPP. The process for the DPP revision would involve technical and environmental review by the MMS, including preparation of an appropriate environmental document pursuant to the National Environmental Policy Act (MMS 2000), and might trigger review

by the CCC for consistency with the California Coastal Management Program. The project is currently on hold.

#### ***Venoco, Inc. Platform Holly Re-drill Program***

This project, which was approved by the CSLC in September 2001, involves re-drilling three production wells from Platform Holly into the Monterey Formation (South Ellwood Field) on State leases 208 and 3242. To date, one of the three wells has been drilled. Short-term effects associated with this project include increased emissions from project drilling equipment and support vessels, possible interaction between marine wildlife and vessels or noise, and increased risks if produced gas does not contain a natural odor. All impacts have mitigation measures to reduce them to less than significant levels (Padre Associates 2001a).

#### ***Berry Petroleum Company Development of Lease 3314***

Berry is currently working with the County of Ventura to obtain drilling permits to drill from their existing facilities located on PRC 735 into PRC 3314, and to recompleat their well on PRC 3314. Berry is finalizing a development plan to submit to the CSLC (CSLC 2003).

#### ***Federal OCS Platforms***

Active oil and gas platforms in Federal waters on the Outer Continental Shelf in the general vicinity offshore of the shell mounds sites (Figure 4-1) include the following: Platforms Houchin and Hogan, operated by Pacific Operators Offshore, Inc.; Platforms Gail and Grace, operated by Venoco, Inc.; and Platforms A, B, C, Henry, Hillhouse, Habitat, and Gilda, operated by Nuevo Energy Company (MMS 2003).

#### ***Rincon Island Limited Partnership (RILP)***

RILP is seeking approval from the California State Lands Commission (CSLC) to abandon subsea Well #102 pursuant to requirements of the CSLC and the State Division of Oil and Gas and Geothermal Resources (DOGGR). The well was placed in production in March 1961, produced to the facilities on Rincon Island until 1971, was subsequently used as a water injection well, then was shut-in in 1979.

#### **4.1.2 Decommissioning**

Over the next 28 years all existing oil and gas platforms in federal and state waters are expected to be removed. Some decommissioning has already occurred. In addition to removal of the 4-H Platforms in 1996, the Offshore Storage and Treatment Vessel and Single Anchor Leg Mooring were removed from the Santa Ynez Unit in federal waters in 1994. As of October 2003, no major decommissioning projects are expected to occur in the next 2 to 3 years (pers. comm., J. Hall, MMS, 2003).

## 4.2 CUMULATIVE IMPACT ANALYSIS

### 4.2.1 Air Quality

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region/Location</i>	<i>Class</i>
<b>PA1 PA2 PA3 PA4 PA5</b>	<b>CAQ-1</b>	Within the SBCAPCD and SCAB, emissions from Program Alternatives involving removal or modification of the shell mounds would add to significant cumulative impacts on ozone levels.	Offshore Santa Barbara County (Shell Mound sites)	I

#### *Impact Discussion: CAQ-1*

Impacts resulting from project emission sources, in combination with emissions from any reasonably foreseeable future project, would occur during implementation of all of the shell mounds Program Alternatives that involve removal or modification of the shell mounds. Due to the mobile nature of most emission sources, the short duration of activities, and proposed mitigation measures, project emissions in combination with future emission sources would not contribute to an exceedance of an ambient air quality standard within any of the air basins affected by the projects. Within the SCAB project region, unmitigated emissions from program activities would exceed the SCAQMD ROC and NO<sub>x</sub> (O<sub>3</sub> precursors) emission significance thresholds. Since the SCAB currently exceeds the national and State O<sub>3</sub> standards by a wide margin, emissions from Program Alternatives 1 through 5 within the SCAB have the potential to contribute to significant cumulative impacts to O<sub>3</sub> levels in this region. Unmitigated emissions from program activities also would exceed the SBCAPCD NO<sub>x</sub> emission significance threshold within Santa Barbara County. This portion of the SCCAB currently exceeds the State O<sub>3</sub> standard. Other than PA3 (in-place capping), the exceedances of the SBCAPCD NO<sub>x</sub> thresholds estimated for the Program Alternatives would occur for a total of 7 to 13 days. Due to the short duration of these emissions and the fact that they would occur almost entirely in the offshore waters of Santa Barbara County, they would not produce significant cumulative impacts to O<sub>3</sub> levels in the region. The capping alternative (PA3) would exceed the SBCAPCD NO<sub>x</sub> threshold for 71 and 166 days, respectively. Due to the extensive duration of these activities, emissions from PA3 have the potential to produce significant cumulative impacts to O<sub>3</sub> levels in Santa Barbara County project region. However, implementation of the mitigation measures described in Section 3.1.4 would ensure that all Program Alternatives would produce less than significant cumulative air quality impacts (Class II).

### 4.2.2 Marine Water Quality and Sediment Quality

None of the ongoing or planned cumulative projects described in Section 4.1 would construct marine structures of sufficient size to alter current or flow patterns in the vicinity of the 4H mounds. Some of the proposed oil and gas operations would entail construction of a pipeline and use of drill pipe and related equipment. However, these

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are small-diameter features, with negligible potentials for altering circulation patterns in the vicinity of the shell mounds. Decommissioning will result in the removal of platform structures. However, this is not expected to alter water circulation within the region. Therefore, cumulative impacts to oceanographic conditions from the 4H shell mound Program Alternatives, including the No Project Alternative, are considered less than significant.

Oil and gas operations, wastewater discharges (point source inputs), and non-point inputs represent sources for solids and chemical contaminants to coastal waters within the general project area. Discharges from oil and gas operations are regulated by discharge permits, which specify limits for waste discharge constituents, as well as monitoring requirements for verifying compliance with permit conditions and ensuring the discharges do not cause significant impacts to the quality of receiving waters. Impacts to water quality associated with platform decommissioning activities are expected to be temporary and localized. Therefore, cumulative impacts to water quality associated with the 4H shell mound Program Alternatives combined with other ongoing and planned projects will be less than significant.

Similarly, impacts to sediment quality associated with ongoing and planned point source discharges from oil and gas and platform decommissioning operations are expected to be localized and short-term. Therefore, with the exception of disposal at the LA-2 site (see below), cumulative impacts to sediment quality associated with the 4H shell mound Program Alternatives combined with other ongoing and planned projects will be less than significant.

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region/Location</i>	<i>Class</i>
<b>PA1</b>	<b>CWQ-1</b>	Disposal at the LA-2 disposal site, if it occurred, would have significant cumulative effects on marine water quality and biota.	LA-2 disposal site	I

#### *Impact Discussion: CWQ-1*

Ocean disposal of the shell mound materials would have a significant unmitigable impact (Class I) as discussed in Section 3.2.4.1. The cumulative effect when combined with other disposal actions at the same site would also be significant and could not be mitigated (Class I).

#### **4.2.3 Marine Benthic Habitats, Invertebrates and Fishes**

Cumulative effects of the projects to the marine biological resources and habitats within the region are associated with 1) increased water column turbidity from anchoring, commercial trawling, and construction/decommissioning activities that disturb sedimentary seafloor; 2) burial or infauna and epibiota directly below pipelines and/or vessel anchors; and 3) removal of high-relief solid substrate associated with the existing platforms. Discharges from existing platforms and wastewater facilities, and from work

vessels are regulated under permits which set limits to ensure that the cumulative impacts of these discharges are not significant.

The abandonment of Well #102, located in approximately 75 ft of water immediately east of Rincon Island, and the decommissioning of existing platforms could be expected to impact the organisms associated with these artificial high-relief structures. Due to the paucity of natural high-relief features in these water depths of Santa Barbara Channel, the platforms and subsea wells can provide suitable habitat for epibiota and fish, including some species of rockfish whose populations are considered depleted (Love et al. 2003). At this time, however, the cumulative impacts of future abandonment projects on marine biota cannot be predicted because specific abandonment projects have not been formally proposed, and the requisite environmental analyses of such projects will have to be completed and factored into the decisions of local, State, and Federal agencies before the impacts are known.

The only remaining hard structure on the shell mounds is the cut-off stub of one platform leg that extends above the Hazel mound. This small, isolated structure, located in deep water, does not provide the same type of hard-substrate habitat that platform structures do, and its loss would not contribute to any effects that might be associated with platform decommissioning.

Although the specific route for the proposed Venoco pipeline has not yet been determined, installation of the 12-inch oil line could be expected to result in a net loss of sedimentary habitat and the associated biota directly below the pipeline. Due, however, to the small area affected, relative to the area of similar habitat within the region, the cumulative effect of this loss is considered insignificant.

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region/Location</i>	<i>Class</i>
<b>PA1</b>	<b>CMB-1</b>	Disposal at the LA-2 disposal site, if it occurred, would have significant cumulative effects on marine water quality and biota.	LA-2 disposal site	I

#### *Impact Discussion: CMB-1*

As discussed above, disposal of the shell mound materials at LA-2, if it occurred, would have a significant unmitigable impact (Class I) as discussed in Section 3.3.4.1. The cumulative effect when combined with other disposal actions at the same site would also be significant and could not be mitigated (Class I).

#### **4.2.4 Marine Wildlife (Marine Mammals, Sea Turtles, and Seabirds,)**

##### *Collision*

Future oil and gas decommissioning activities would engender risks to marine wildlife similar to those of the shell mounds disposition. Such risks, however, can be mitigated as described for the shell mounds. Generally, commercial shipping and private boating

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activities will probably continue to gradually increase in the SCB. This could result in an increase in the number of ship strikes on listed species, particularly those species that are appearing more abundantly in favored environments, such as along the north shores of the northern Channel Islands. The region in and near the action area is notable for its lack of diversity, however. Cumulative effects from collision are not anticipated in or near the action area. Moreover, such action would take place over an extremely short period of time.

##### *Harassment*

Commercial and private whale watching has become increasingly popular over the past three decades. To avoid incidents of harassment, NOAA Fisheries has published guidelines for whale watching. Violators can be reported and prosecuted, especially if videotaped evidence is presented. On occasions, federal agents have traveled as passengers aboard commercial whale watching boats to determine if any harassment is taking place. Increased awareness of harassment issues, plus occasional prosecutions, appear to have reduced incidents of harassment despite increased whale watching activities (Cordaro, NOAA Fisheries, 2002). The likelihood of increased incidents of harassment in or near the action area is remote in any event, given the overall lack of diversity and abundance of species there. Cumulative effects from harassment are not anticipated in or near the action area.

##### *Anthropogenic Noise*

Increasing anthropogenic noise in the ocean is of concern to NOAA Fisheries because it may result in behavioral changes, cause stress, interfere with communication and predator and prey detection, and in the case of odontocetes, echolocation (Carretta *et al.* 2001). However, no standards have been established by NOAA Fisheries for noise from shipping and other human activities in the sea. Considering the overall lack of diversity and abundance of species, increased anthropogenic noise is not anticipated to result in any cumulative effects. If action is taken to remove, modify or enhance the shell mounds, project noise would be extremely short-lived and would be reduced to insignificant levels with the mitigation measures described in Section 3.4.

##### *Pollutants*

No new leases are available, nor are any new platforms planned. Removing the shell mounds or capping them would result in fewer pollutants in the environment in the long term. Increases in pollutant concentrations in the water column during decommissioning activities, similar to removal, disposal, or modification of the shell mounds, would be temporary and very localized, and would not contribute to cumulative effects on wide-ranging species. However, there could be cumulative effects if shell mounds sediments were disposed at LA-2.

<i>Program Alternative</i>	<i>Impact #</i>	<i>Impact Description</i>	<i>Region/Location</i>	<i>Class</i>
<b>PA1</b>	<b>CMW-1</b>	Disposal at the LA-2 disposal site, if it occurred, would have significant cumulative effects on marine water quality and biota.	LA-2 disposal site	I

#### *Impact Discussion: CMW-1*

Disposal of the shell mound materials would have a significant unmitigable impact (Class I) as discussed in Section 3.4. The cumulative effect when combined with other disposal actions at the same site would also be significant and could not be mitigated (Class I).

#### **4.2.5 Commercial and Recreational Fishing**

Except for the abandonment of Well #102 associated with the Rincon Island Project and the installation of the 28.75 mile-long pipeline from Platform Holly to the Rincon Onshore Separation Facility (Venoco extended field development), ongoing and probable future projects are not expected to substantially increase non-fishing vessel activity nor result in preclusion of additional seafloor or open water habitats to fishing activities.

The abandonment of Well #102, located in approximately 75 ft of water immediately east of Rincon Island, is likely to involve some vessel anchoring and result in a short-term (estimated to be one month or less) temporary loss of fishing area, an insignificant cumulative impact to the fishing activities. Coupled with the removal of other wells, pipelines, and OCS structures, the removal is expected to benefit commercial fishing operations through the increase of available trawl area within the California Halibut Trawl Grounds, which encompass this portion of the nearshore area, and offshore trawl areas by eliminating potential snags from the seafloor.

Although the specific route for the proposed Venoco pipeline has not yet been determined, installation of the 12-inch oil line could be expected to result in additional short-term preclusion of commercial fishing, particularly nearshore trawling activities, within the construction vessel anchoring areas. Due to the anticipated short-term nature of the pipe laying activities (likely less than 6 months total) and the relatively narrow corridor within which the vessels will be, no significant cumulative impacts on the fisheries activities are expected.

Due to the relatively small area affected by those projects, no long-term significant cumulative fisheries-related impacts are expected.

#### **4.2.6 Land Use and Recreation**

Neither the proposed Program Alternatives, nor the projects considered in the cumulative impact analysis would result in land use impacts. As noted below in Section 4.2.7, some of the anticipated future projects on offshore oil and gas leases would

1 generate increased vessel trips. As would occur under the proposed Program  
2 Alternatives, only a small number of vessel trips would be required to support short-term  
3 construction or drilling activities. Since a relatively small area would be affected, the  
4 area would be easily avoidable, and ocean-based recreational boating  
5 opportunities are widely available, cumulative impacts on recreational boating would be  
6 less than significant. Impacts on recreational fishing are addressed in Section 4.2.5.

#### **4.2.7 Transportation**

8 Some of the anticipated future projects on offshore oil and gas leases would generate  
9 increased vessel trips. Most of the increased vessel trips would be related to short-term  
10 construction or drilling activities. These trips would occur primarily between their  
11 respective offshore locations and the Port of Hueneme to deliver equipment and  
12 supplies and to rotate crews, and would amount to several trips per day per project.

13 The relatively small amount of vessel traffic (dredging activity, barge trips, and  
14 supply/crew boat trips) generated by any of the shell mounds Program Alternatives (see  
15 Section 3.7.3) combined with vessel traffic potentially generated by any of the  
16 cumulative projects would not be sufficient to delay normal movements of commercial or  
17 military vessels in the project area. Even if all of the cumulative projects were to occur  
18 at the same time as shell mounds removal, the cumulative impact on vessel  
19 transportation would be less than significant.

20 The onshore disposal option for dredged material would result in traffic impacts on  
21 highways between Port of Long Beach (POLB) and the final disposal site. These  
22 impacts would be less than significant (see Section 3.7.3.1). The onshore traffic  
23 impacts of the cumulative projects would be very small and would be dispersed in time  
24 and place. Even if all of the cumulative projects were to occur at the same time as the  
25 proposed dredged material disposal activity, the cumulative impact on ground  
26 transportation would be short term and less than significant.

#### **4.2.8 Onshore Geology, Water Resources, and Biological Resources**

28 As discussed in Section 3.2.8, there would be no significant impacts on onshore  
29 geology, water or biological resources associated with the transfer or disposal of dredge  
30 materials at POLB or their disposal at an approved recycling facility or permitted landfill,  
31 since existing, developed land and infrastructure would be used for these activities. If  
32 POLB accepts the dredge materials for its own beneficial use, they would be used for  
33 upland landfill within Port property for future, unspecified construction projects, subject  
34 to environmental compliance at that time, and would not affect onshore geology, water  
35 or biological resources. Implementation of Program Alternatives 1 through 6 would not  
36 contribute to cumulatively significant impacts on these resources.

#### **4.2.9 Safety/Hazards/Risk of Upset**

38 All of the related projects described in Section 4.1 would involve the use of vessels and  
39 equipment powered by diesel fuel and lubricated by oil and other mechanical fluids,  
40 which are considered hazardous substances. Accidental releases of such substances

(e.g., spills arising from leakage of fuel, motor oil, or hydraulic fluid during operation and/or equipment maintenance) have the potential to adversely affect human health and safety. Implementation of required measures (e.g., operational procedures, personnel training, maintenance programs, and spill contingency plans) would minimize the potential for an accidental release to occur.

The proposed Program Alternatives could also result in potentially significant impacts associated with accidental releases of hazardous substances, and related effects on public health and safety. It is expected that such impacts would be reduced to less than significant levels with implementation of required mitigation measures. Nonetheless, implementation of Program Alternatives 1 through 5 could contribute to cumulatively significant hazard impacts.

Program Alternatives 1 through 5 would require the use of vessels and equipment powered by diesel fuel and lubricated by oil and other mechanical fluids, which are considered hazardous substances. Implementation of any of these Program Alternatives at the same time as one or more of the cumulative projects would not increase the likelihood or severity of accidental releases. Thus, no cumulative effect would result.

Transport and disposal of materials would require the use of vessels, vehicles, and other equipment powered by hydrocarbon fuels and lubricated by oil and other mechanical fluids, which are considered hazardous substances. Implementation at the same time as one or more of the cumulative projects would not increase the likelihood or severity of accidental releases. Thus, no cumulative effect would result.

#### **4.2.10 Other Resources and Issue Areas**

##### **4.2.10.1 Cultural Resources**

None of the Program Alternatives would have any impact on cultural resources. There would thus be no cumulative impact on cultural resources with any of the projects described in Section 4.1.

##### **4.2.10.2 Noise**

As described in Section 4.2.7, certain projects considered in the cumulative impact analysis (Venoco and Carone Petroleum) would result in a small, temporary increase in the number of vessels using Port Hueneme. Even if the boat trips occurred simultaneously with the trips associated with the proposed Program Alternatives, this would not measurably increase ambient noise levels at the Port since they would be spread over a period of days and are consistent with the activities that already occur. None of the projects considered in the cumulative impact analysis would affect noise levels at the POLB. Moreover, no human sensitive noise receptors are located near Port Hueneme. The proposed Program Alternatives would not contribute to cumulatively significant noise impacts.

**4.2.10.3 Public Services and Utilities**

Implementation of any of the proposed Program Alternatives 1 through 5 could temporarily increase demand for the services of the U.S. Coast Guard or Office of Emergency Services, but such increases would not negatively affect service objectives or necessitate new facilities and would be less than significant. None of the Program Alternatives would increase demand for water or power supplies, infrastructure, or sewer and stormdrain capacity. Dredge materials and caisson debris generated by Program Alternatives proposing dredging and caisson removal would be transported by haul trucks hired for the purpose and disposed of in an approved recycling facility or permitted landfill, and would not increase demand for solid waste disposal. Therefore, the Program Alternatives would not contribute to cumulatively significant impacts on public services or utilities.

**4.2.10.4 Aesthetics**

Program-related dredging, caisson removal, and dredge/debris transport and disposal activities would take place sufficiently distant offshore or removed from public view within the POLB to prevent any impacts on aesthetic resources. Therefore, the Program Alternatives would not contribute to cumulatively significant impacts.

**4.2.11 Environmental Justice**

The only potentially significant project impact identified that could occur near onshore population centers, and thus minority or low-income populations, is due to the increase in emissions of criteria pollutants and toxic air contaminants (TACs) during dredge material transport to the POLB and Kern County. Specifically, tugboat operations within the POLB and dredge material transport by haul trucks between the POLB offloading site and Kern County disposal sites would result in cumulatively considerable net increases of nonattainment pollutants (ROC, CO, and NO<sub>x</sub>) within the South Coast Air Basin (SCAB). However, Section 3.1 acknowledges that due to the mobile and intermittent nature of proposed emission sources and the short duration of proposed activities, these sources would produce minimal air quality impacts at any particular location within the SCAB onshore region, including minority or low-income neighborhoods adjacent to the POLB or along roadways used by project trucks. As a result, emissions of criteria pollutants or TACs from the Program would not contribute to cumulatively significant environmental justice impacts.